



Week 1 Assignment: Teacher Interview

Overview

In this assignment, you will interview a teacher that has been teaching at least 20 years. During the interview ask them to compare and contrast their teaching practices before and after the availability of the Internet in schools. You will present your findings in a paper.

Rubric

Use the following rubric to guide your work.

Tasks ↓	Exemplary	Satisfactory	Needs Improvement	Unsatisfactory
Content	Response demonstrates an in-depth examination and understanding of the research and theories of relevance to the field of study. Response includes all components and meets or exceeds all requirements indicated in the instructions. Each part of the assignment is addressed thoroughly. (Max. of 25 pts)	Response demonstrates a sound examination and adequate understanding of the research and theories of relevance to the field of study. Response includes all components and meets all requirements indicated in the instructions. Each part of the assignment is addressed. (Max. of 22 pts)	Response demonstrates a limited examination and understanding of the theories of relevance to the field of study. Response is missing some components and/or does not fully meet the requirements indicated in the instructions. (Max. of 20 pts)	No content (0 points)
Mechanics	The paper adheres to APA stylistic guidelines. Writing is clear, concise, and well organized. The paper has a sound thesis and excellent sentence/paragraph construction. Thoughts are expressed in a coherent and logical manner. There are no more than three spelling, grammar, or syntax errors per page of writing. (Max. of 5 pts)	The paper adheres loosely to APA stylistic guidelines. Writing is mostly clear, concise, and well organized. The paper has a thesis and good sentence/paragraph construction. Thoughts are expressed in a coherent and logical manner. There are no more than five spelling, grammar, or syntax errors per page of writing. (Max. of 4 pts)	The paper does not adhere to APA stylistic guidelines. Writing is unclear and/or disorganized. The thesis is weak, and sentence/paragraph construction is poor. Thoughts are not expressed in a logical manner. There are more than five spelling, grammar, or syntax errors per page of writing. (Max. of 3 pts)	Does not use APA stylistic guidelines. No thesis. No logical sequence of thought (0 points)

Directions

Interview a teacher that has been teaching at least 20 years. In the interview ask them to compare and contrast their teaching practices before and after the availability of the Internet in schools. Present your findings in a paper. Use the following guidelines:

- Use the *APA Style Guide*.
- Give your paper a title. Whatever title you choose, it should clearly and concretely reflect the content of your paper.
- Double-space your paper and use one-inch margins. Use a 12-point font. Use Times New Roman as the font. When complete, your review should be 500 to 700 words in length.
- Include a list of references, on its own page, at the end of the review. Use *APA* documentation for in-text citations and for the bibliographic citations in the references.
- Use a minimum of 4 research articles, chapters, or books to support your discussion paper.

This assignment is due no later than 11:59 p.m. on the seventh day of Week 1.

Workspace

Write your paper in the expandable box provided.

Teaching Science Online

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TEACHING CHEMISTRY AND PHYSICS IN THE INTERNET AGE

Teaching Physical Science Online:

High School Chemistry and Physics in the Internet Age

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In partial fulfillment of the requirements for EDLD 5362

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As we look for ways to improve teaching and learning, it is critical to understand the effect the Internet has had in the modern classroom. One method to discover the effects of this new information source and communication medium is by interviewing an educator with extensive classroom experience both before and after the rise of the Internet. To this end, I interviewed Brother Dennis Doose, CSC, currently an instructor at Holy Cross High School in San Antonio, Texas. Br. Doose is a lifelong teacher of the physical sciences, with almost four decades of classroom experience teaching high school-level Chemistry and Physics courses.

My first question concerned whether Br. Doose considered the use of the Internet in the science classroom to be an overall positive, negative or neutral event during his teaching career. “The Internet is definitely a positive!” Br. Doose exclaimed. “In fact, as years went on and many experiments with actual chemicals and devices were removed from the classroom due to concerns over injury to students, I saw science learning decrease as students became more reliant on dry books, videos and lectures to learn science. With the Internet, students can now find a multitude of websites from the National Science Foundation and other reliable sources containing multiple, interactive examples of experiments and projects. This lets them see and experience experiments we can no longer do, and the kids are excited again. Students even find interactive Web sites on the periodic tables and other resources, and bring them to me, to improve my class.”

I asked Br. Doose what, if any, concerns he had regarding using the Internet to teach science; he stated “My biggest concern is teaching students to evaluate the validity, efficacy and ethical

nature of the information they find on the Internet; this is something we did not deal with in the past, as the materials and textbooks used to come from authoritative sources. There is a lot of information out there [on the Web] from questionable sources, some of it deliberately designed to deceive, and this situation is worsening as years go by. This was not as big a concern five or six years ago as it is today.” Carroll and Witherspoon (2002) support this opinion, as they state that “Not all information on the Internet is quality information, or appropriate for use with students.” (p. 33)

A related important issue that surfaced during the interview is the need to teach students to find the most *relevant* information on the Web. “Even if a student finds information that is valid and ethical, it may not be relevant to the specific experiment or exercise at hand, or there may be other information available that is more relevant.” Br. Doose said. As we discussed his concern, I realized that this is a finer detail, more difficult to relate to the students than whether information is valid or ethical. The modern student is raised in an age of instant gratification, and we must teach them the patience and persistence necessary to keep searching and not just accept the first valid, ethical answer found on Google. This problem continually becomes more difficult; as Ebenezer and Lau (2003) state, “An increasing number of Web sites are added each day to the Internet, thus making it more difficult to find relevant information. “ (p. 3)

Br. Doose brought up a point I had not considered before this interview; science has to be made interesting and engaging for students to be drawn into it and enjoy the experience of discovery, and the Web offers a richness of scientific exploration and discovery that no textbook,

video or lecture ever could. Johnson (2003) expands upon this point, stating that “Students can explore the wide world of science by finding out about scientists’ ideas and discoveries, experiencing virtual field trips, virtually meeting scientists of the past and present, and virtually observing them as in actual time as they think, work and write. Many of these explorations and experiences would be lost to them or difficult opportunities to achieve without the Internet...” (p.1)

According to Br. Doose, one of the most important advantages of using the Internet to teach the physical sciences is affording students the ability to access sophisticated scientific instruments and tools that high schools do not possess. To this end, Wetzel (2005) observes that “Virtual labs enable students to manipulate laboratory equipment through the Internet. Virtual laboratory equipment may include electron microscopes and magnetic resonance imaging devices that allow students to collect real-time data and store it on their classroom computers.” (p. 13). This is a game-changing situation, as it allows high school students to achieve hands-on experience using scientific equipment that was previously only available in leading universities. Br. Doose expressed the belief that experiential learning of this magnitude will help return American students to the forefront of world scientific leadership.

As the interview drew to a close, I asked Br. Doose what he thought the Internet might hold in store for teaching science in the coming years. His answer was simple: virtual reality. Just as access to online scientific tools and explorations are improving the experience of learning science, advanced virtual reality would allow students to perform first-person virtual experiments

using chemicals and devices too dangerous to allow in any classroom; students would thereby gain that “eureka moment”, the excitement of exploration that only firsthand experience can offer.

In conclusion, it is clear that teachers who have extensive experience in the classroom both before and after the rise of the Internet can embrace the potential of the Internet to positively change student’s lives. The advantages discussed herein show that it is not only worth the effort, but an absolute necessity for teachers to overcome any inherent concerns or obstacles regarding using the Internet to teach the physical sciences; their students will benefit in ways we are just beginning to understand. Br. Doose summed it up best in his closing comment: “I’ve seen a lot of educational fads come and go, but the Internet is not a fad; it is the future of teaching.”

References

- Carroll, J. A., & Witherspoon, T. L. (2002). *Linking Technology and Curriculum: Integrating the ISTE NETS Standards into Teaching and Learning*, 2nd ed. Upper Saddle River, NJ: Merrill Prentice Hall.
- Ebenezer, J. V., & Lau, E. (2003). *Science on the Internet: A Resource for K-12 Teachers*, 2nd ed. Upper Saddle River, NJ: Merrill Prentice Hall.
- Johnson, Carolyn (2003). *Using Internet Primary Sources to Teach Critical Thinking Skills in the Sciences*. Westport, CN: Libraries Unlimited, Inc.
- Wetzel, David R. (2005). *How to Weave the Web into K-8 Science*. Arlington, VA: NSTA Press